Roll No. | | | | | | | | | | | | Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(AI&ML / CSE) (Sem.–5)

STATISTICAL COMPUTING TECHNIQUES USING R

Subject Code : BTES-501-20

M.Code : 93170

Date of Examination : 29-11-2023

Time : 3 Hrs. Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION-A

1. Write briefly :

a. Write an example of descriptive statistics computing using R.

b. How we can read CSV file into R?

c. Write functions used for plotting scatter plot and histogram in R.

d. Write Syntax of if else in R.

e. Fill in the blank in Random Sample Generation: rbinom (_____,_____ ,_____).

f. Write R script to create a linegraph.

g. What is the purpose of regression analysis?

h. Why is R a popular choice for big data analysis?

i. How we can access columns from data frame?

j. How can you calculate the median of a dataset using R?

SECTION-B

2. Differentiate between Scalars, Vector, List, Matrix and Data frame.

3. Explain different system defined functions used in R. Give suitable examples.

4. Explain the process of performing chi-squared tests of independence to analyze relationships between these variables. Provide step-by-step instructions for conducting the test using R.

5. Explain different functions used in R for statistical analysis.

6. Write R program to create pie chart for the data Housing 700, Food 200, Clothes 250, entertainment 250 and others 300.

SECTION-C

7. Discuss the challenges associated with processing big data using R. How can you efficiently handle issues like memory limitations, processing speed and scalability while working with large datasets?

8. Explain the general outline of EDA process in R. Give suitable example.

9. **Write a short notes on :**

   a) Generalized linear models

   b) Binomial Distribution

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.